

Patent Claims

1. An apparatus for processing sheet material, in particular bank note processing machine, comprising
 - a transport path (1) for the sheet material (100),
 - a checking device (SP 4) for checking the sheet material (100) with at least two components (4,5; 4,15) lying opposite each other along the transport path (1),
 - in transport direction before the checking device a conveyor belt (2) and opposite thereto transport devices (3) for holding and guiding the sheet material, wherein the conveyor belt (2) with the help of at least one deflection roller (6; 16) is led away from the transport path (1) before the checking device, so that the sheet material in the sensing region of the checking device is without a guidance by conveyor belt, and
 - clamping rings (10), which are disposed coaxial to the at least one deflection roller (6; 16) disposed in transport direction before the checking device and project over the conveyor belt (2),wherein the transport devices (3) lying opposite the conveyor belt (2) co-operate with the clamping rings (10), in order to grasp sheet material (100) guided in the transport path (1) and to guide it through between the two components (4, 5; 4,15) of the checking device (SP 4), characterized in that by the co-operation of the transport devices (3) with the clamping rings (10) the sheet material is led through between the two components of the checking device in plane alignment and that for supporting this process a guide plate (8) is provided, which combs with the clamping rings (10).
2. The apparatus according to claim 1, characterized in that the conveyor belt (2) is led around the checking device (SP 4) with the help of the at least one deflection roller (6; 16).

3. The apparatus according to claim 1 or 2, characterized in that the clamping rings (10) at least along their outside circumference consist of elastic material.
4. The apparatus according to claim 3, characterized in that the circumference path of the clamping rings (10) slightly overlaps with a circumference path of the transport devices (3) co-operating with them.
5. The apparatus according to any of claims 1 to 4, characterized in that the clamping rings (10) and the at least one deflection roller (6; 16) are disposed on a common shaft (14).
6. The apparatus according to any of claims 1 to 5, characterized in that the transport devices (3) are actively driven and the clamping rings (10) independently of the at least one deflection roller (6; 16) passively rotate along with the transport rollers (3).
7. The apparatus according to any of claims 1 to 6, characterized in that the clamping rings (10) are rigidly connected to each other.
8. The apparatus according to any of claims 1 to 7, characterized in that the guide plate (8) extends opposite one of the two components (4) of the checking device (SP 4) along the transport path (1) and defines a guiding channel (11) for the sheet material to be checked, the narrowest point of which lies in transport direction behind the clamping rings (10).
9. The apparatus according to claim 8, characterized in that the guiding channel (11) continuously widens in transport direction behind the narrowest point.
10. The apparatus according to any of claims 1 to 9, characterized in that the transport devices (3) lying opposite the conveyor belt (2) are transport rollers in transport direction spaced apart from each other.
11. The apparatus according to any of claims 1 to 9, characterized in that the transport devices (3) lying opposite the conveyor belt (2) also comprise a

conveyor belt, which is led away from the transport path (1) before the checking device (SP 4) with the help of at least one deflection roller.